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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,603	03/15/2004	Tomoo Yamasaki	CU-3637 RJS	1812
26530	7590	05/05/2005	EXAMINER	
LADAS & PARRY LLP 224 SOUTH MICHIGAN AVENUE SUITE 1200 CHICAGO, IL 60604			SANDVIK, BENJAMIN P	
			ART UNIT	PAPER NUMBER
			2826	

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/800,603

Applicant(s)

YAMASAKI ET AL.

Examiner

Ben P. Sandvik

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☒ Claim(s) 13-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Claim Objections***

Claims 13-18 are objected to because of the following informalities: claims 13-18 contain only a limitation that is already set forth in claim 1. Claims 13-18 all depend from claim 1, hence these claims are redundant. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim 1, 4-7, 12, 13, and 16-18 is rejected under 35 U.S.C. 102(e) as being anticipated by Sweterlitsch (U.S. Patent #6737742).

With respect to **claim 1, 13, and 16-18**, Sweterlitsch teaches a substrate body (Fig. 1, 230, 210, 100) having a wiring layer (Col 2 Ln 20).

a base (Fig. 1, 240) formed by a material that is different from a material of said substrate body, supporting said substrate body, and having an opening forming portion where a semiconductor element (Fig. 1, 310) is mounted;

and a reinforcing member (Fig. 1, 230) larger than the opening forming portion, provided in said substrate body at a portion corresponding to the opening forming portion, and reinforcing said substrate body at the portion corresponding to the opening forming portion.

With respect to **claim 4**, Sweterlitsch teaches a reinforcing member that is an interposer having a via that directly electrically connects the semiconductor element and the wiring layer (Col 2 Ln 20).

With respect to **claim 5**, Sweterlitsch teaches a reinforcing member arranged on the base via an abutting member made of a metal (Fig. 1, 215).

With respect to **claim 6**, Sweterlitsch teaches a reinforcing member arranged on the base via an abutting member made of a metal (Fig. 1, 215).

With respect to **claim 7**, Sweterlitsch teaches manufacturing a reinforcing member (Fig. 1, 230), arranging the reinforcing member on a base (Fig. 1, 240) at a portion corresponding to an opening forming portion of the base, forming a substrate body (Fig. 1, 230, 210, 100) on the base on the reinforcing member is

arranged, said substrate body including a wiring layer (Col 2 Ln 20) and made of a material that is different from a material of the base, and forming the opening forming portion smaller than the reinforcing member, thereby exposing a part of the reinforcing member at the opening forming portion.

With respect to **claim 12**, Sweterlitsch teaches a reinforcing member arranged on the base via an abutting member made of a metal (Fig. 1, 215).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 3, 8-11, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sweterlitsch, in view of Crockett et al (U.S. PG Pub #20020100611)

With respect to **claim 2, 3, 8-11, 14, and 15**, Sweterlitsch teaches all of the limitations of claim 1, and furthermore teaches a reinforcing member is arranged on the base via an abutting member made of metal (Fig. 1, 215), and a semiconductor element mounted in the opening forming portion of the substrate (Fig. 1, 310), but does not teach a reinforcing member that is a circuit board having a capacitor part that electrically connects the semiconductor element and the wiring layer. Crockett teaches that a capacitor can be embedded into a

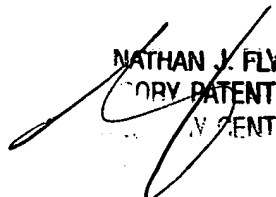
printed circuit board via (Paragraph 27). It would have been obvious to one of ordinary in the art at the time the invention was made to provide a via-like capacitor as taught by Crockett in the printed circuit board of Sweterlitsch for decoupling purposes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ben P. Sandvik whose telephone number is (571) 272-8446. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PRIMARY PATENT EXAMINER  
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